

FIG. 1

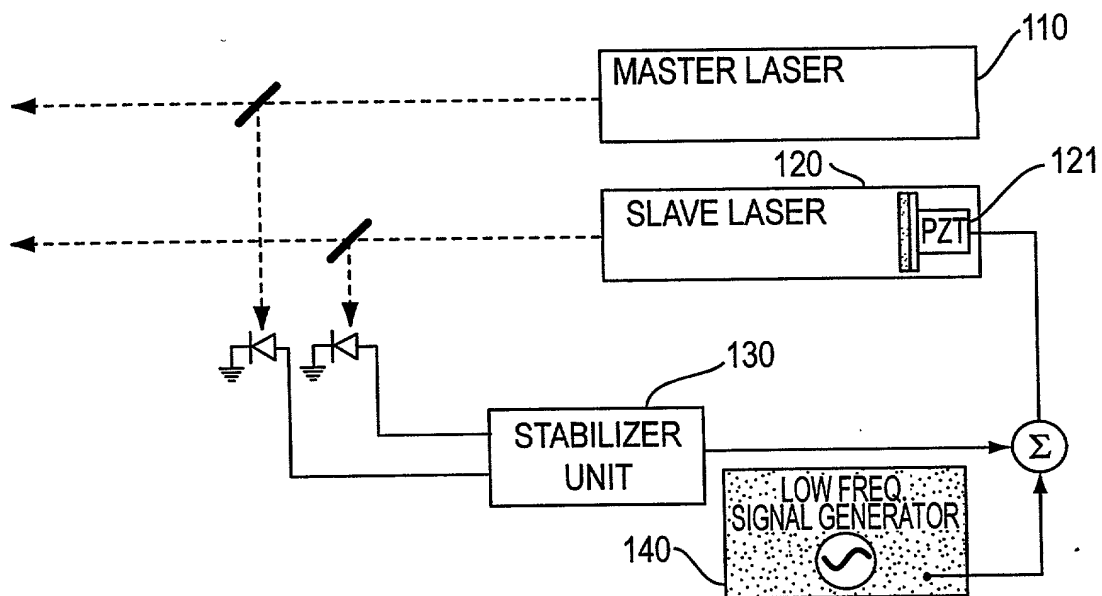


FIG. 2(A)

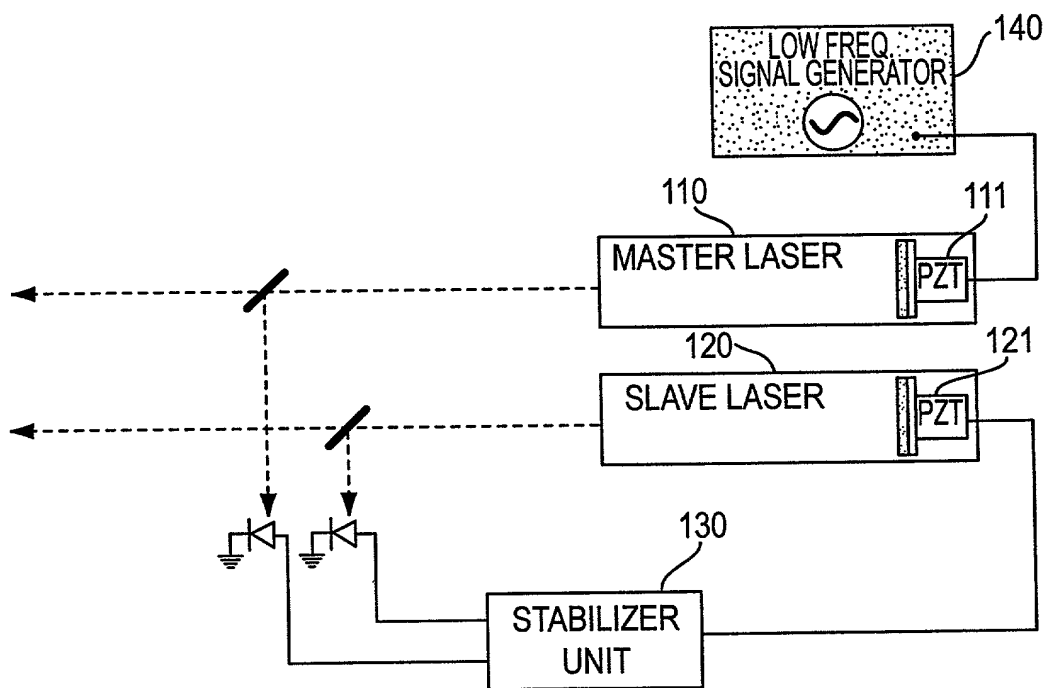


FIG. 2(B)

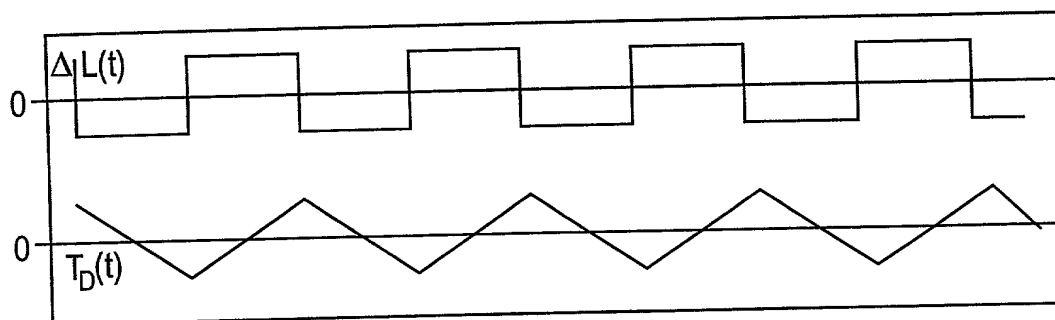


FIG. 3(A)

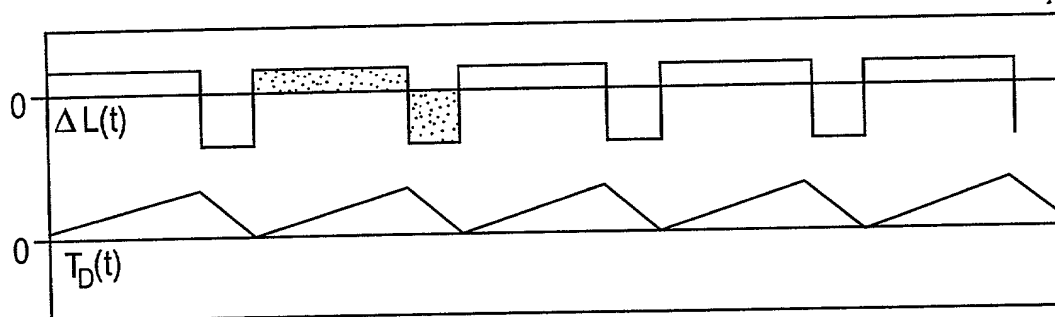


FIG. 3(B)

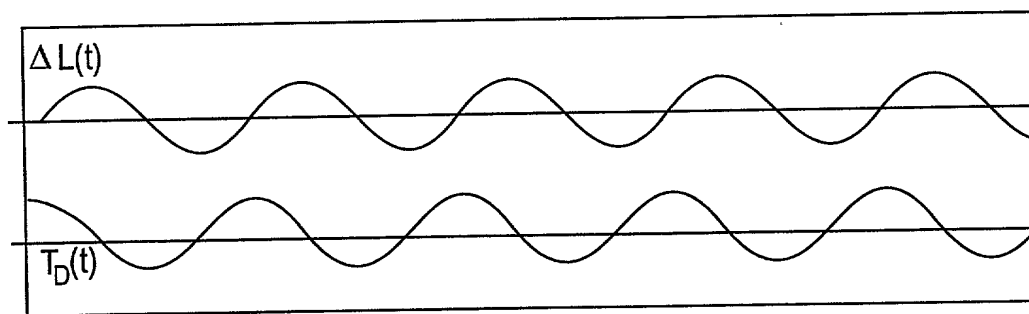


FIG. 3(C)

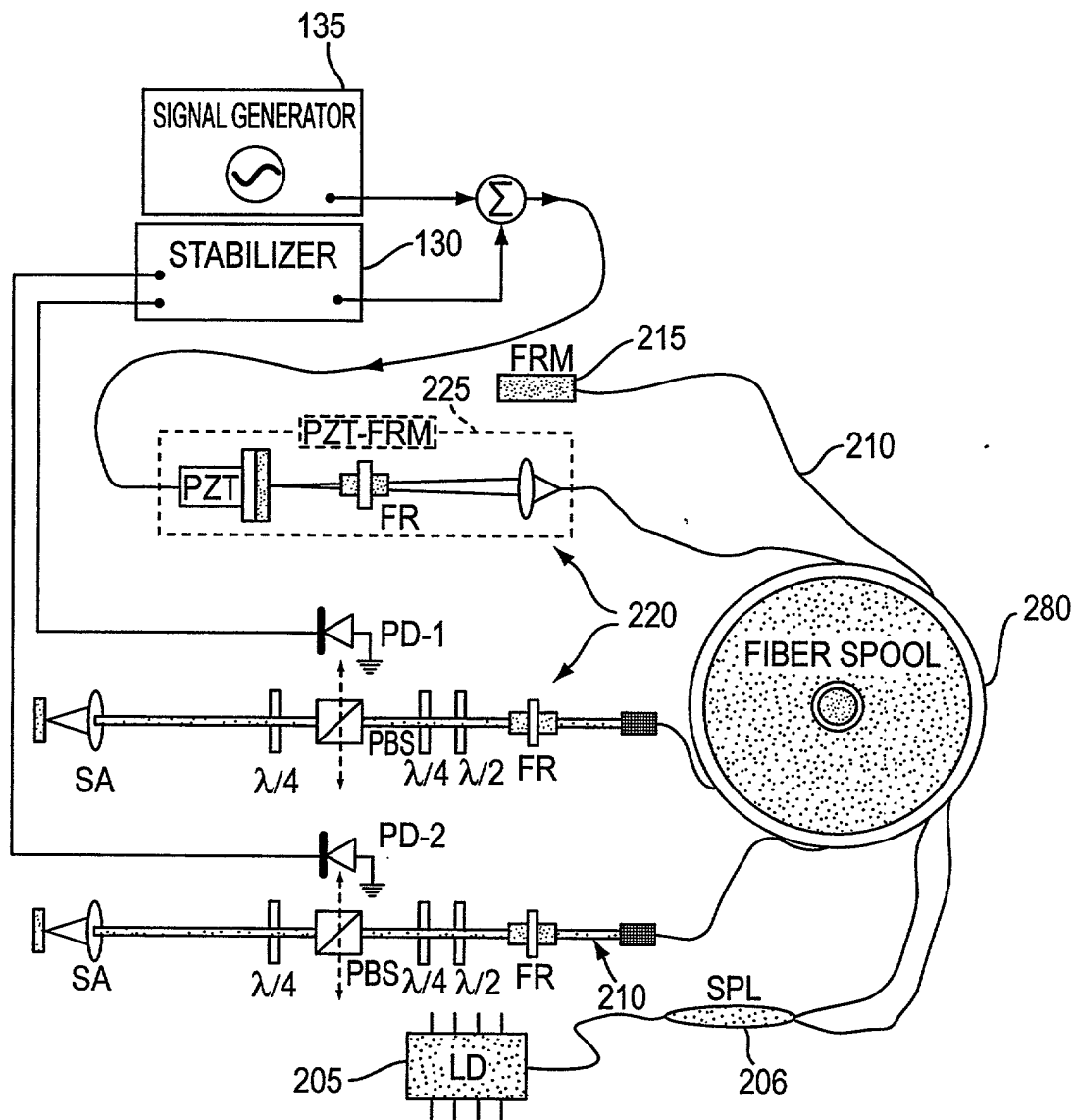


FIG 4

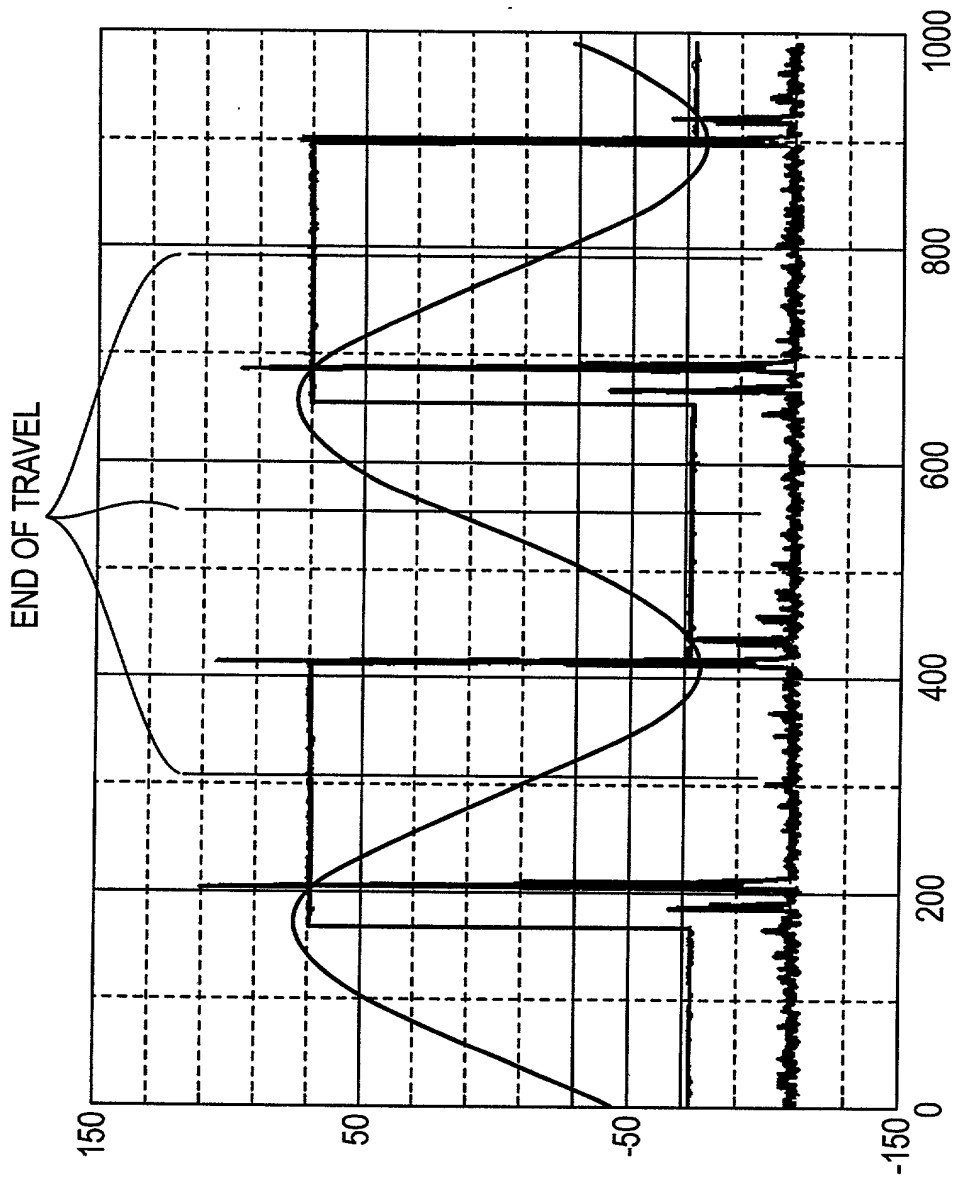


FIG. 5(A)

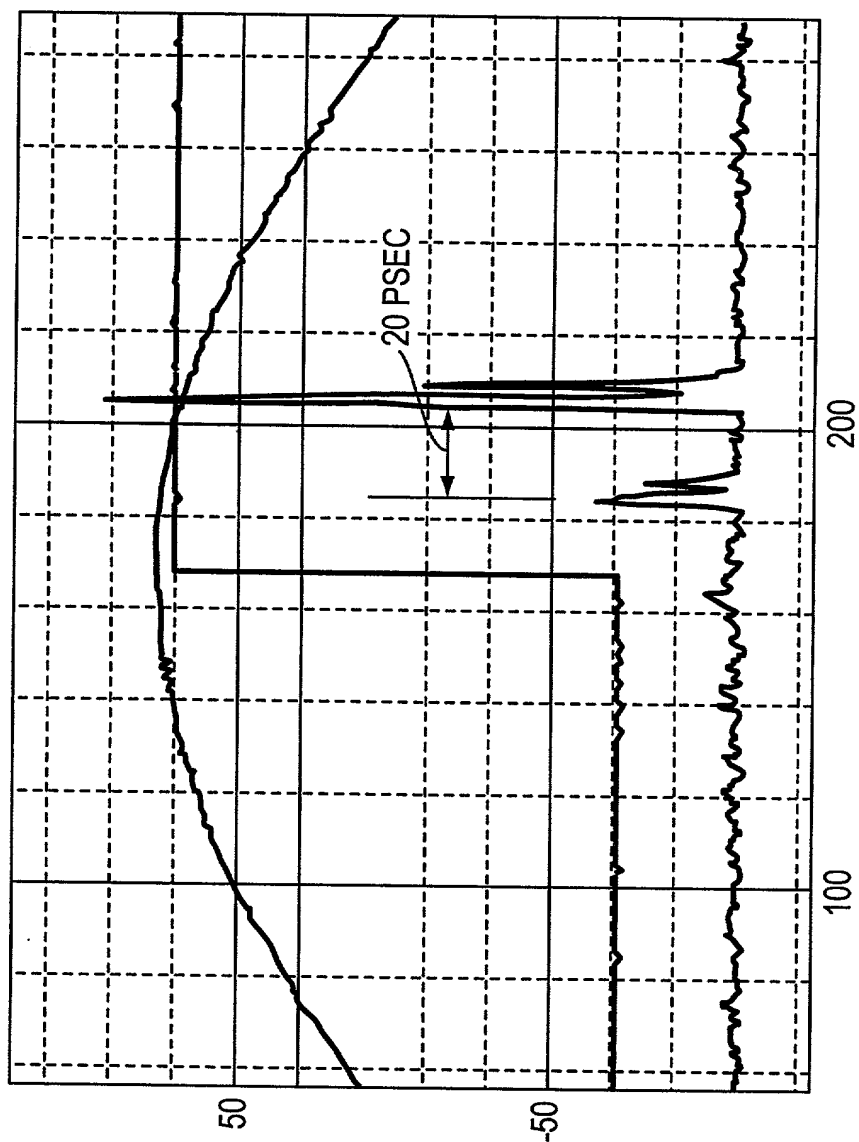


FIG. 5(B)

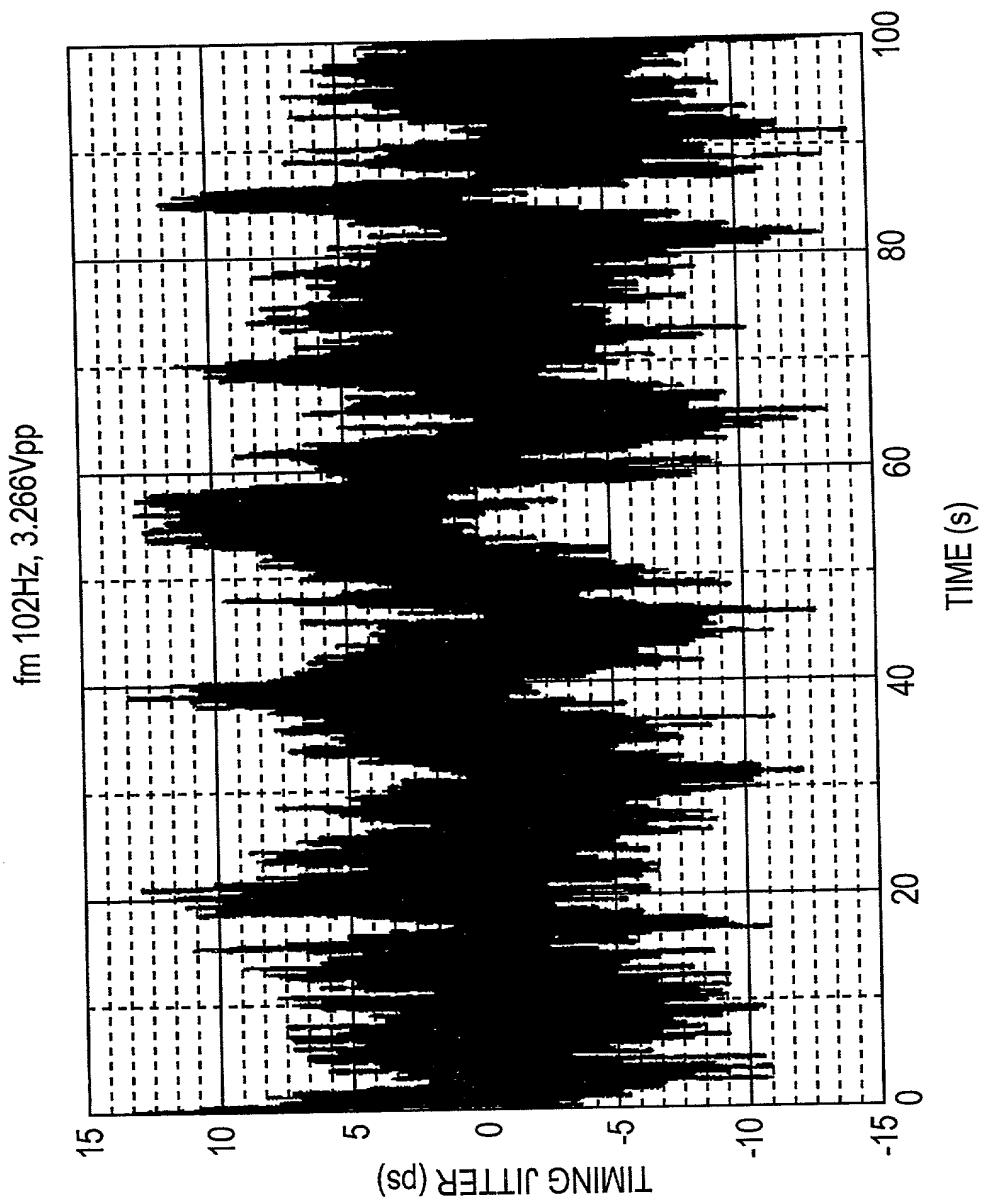


FIG. 5(C)

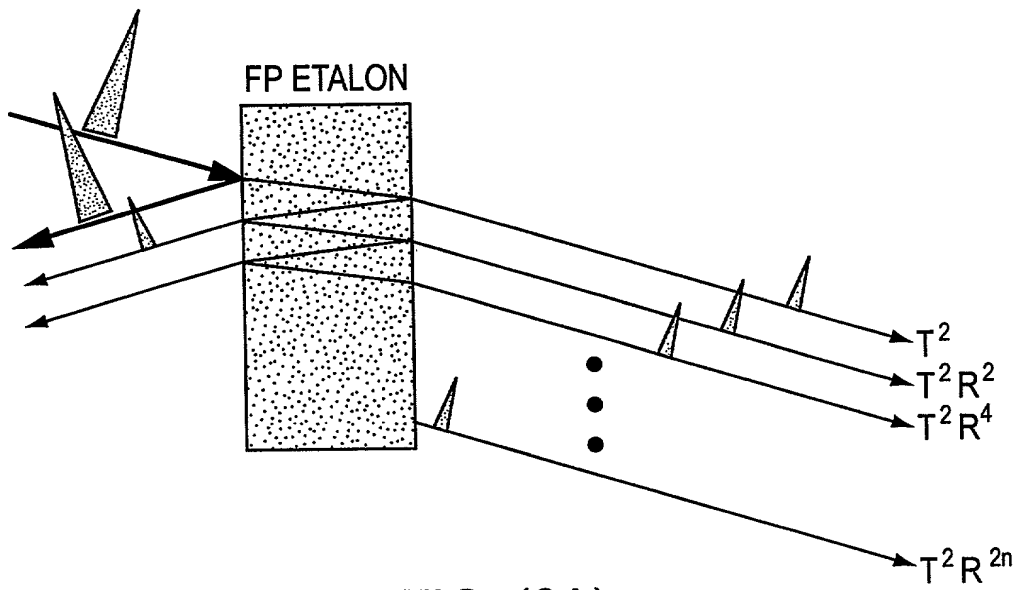


FIG. (6A)

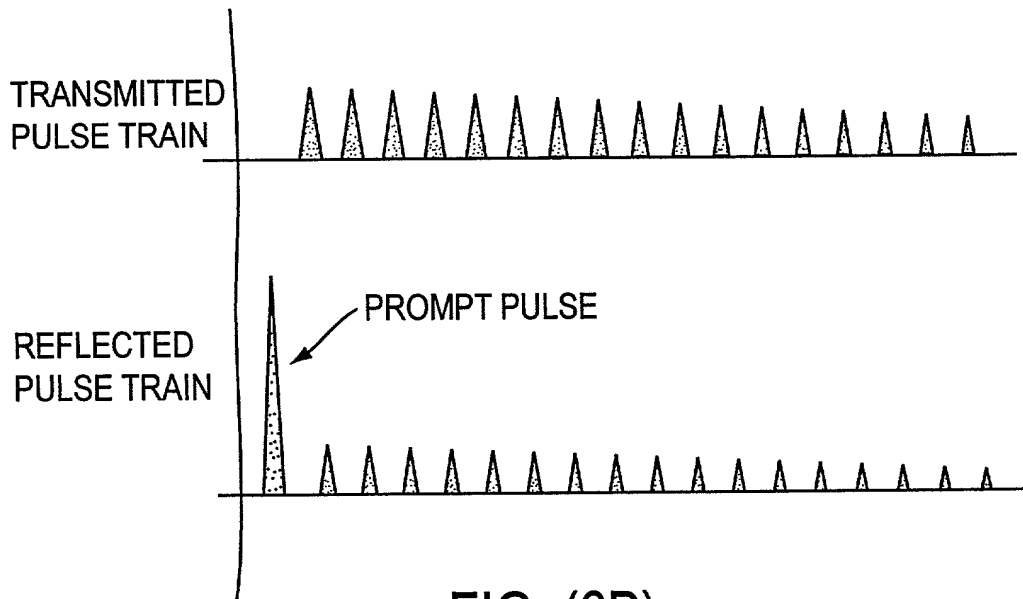


FIG. (6B)



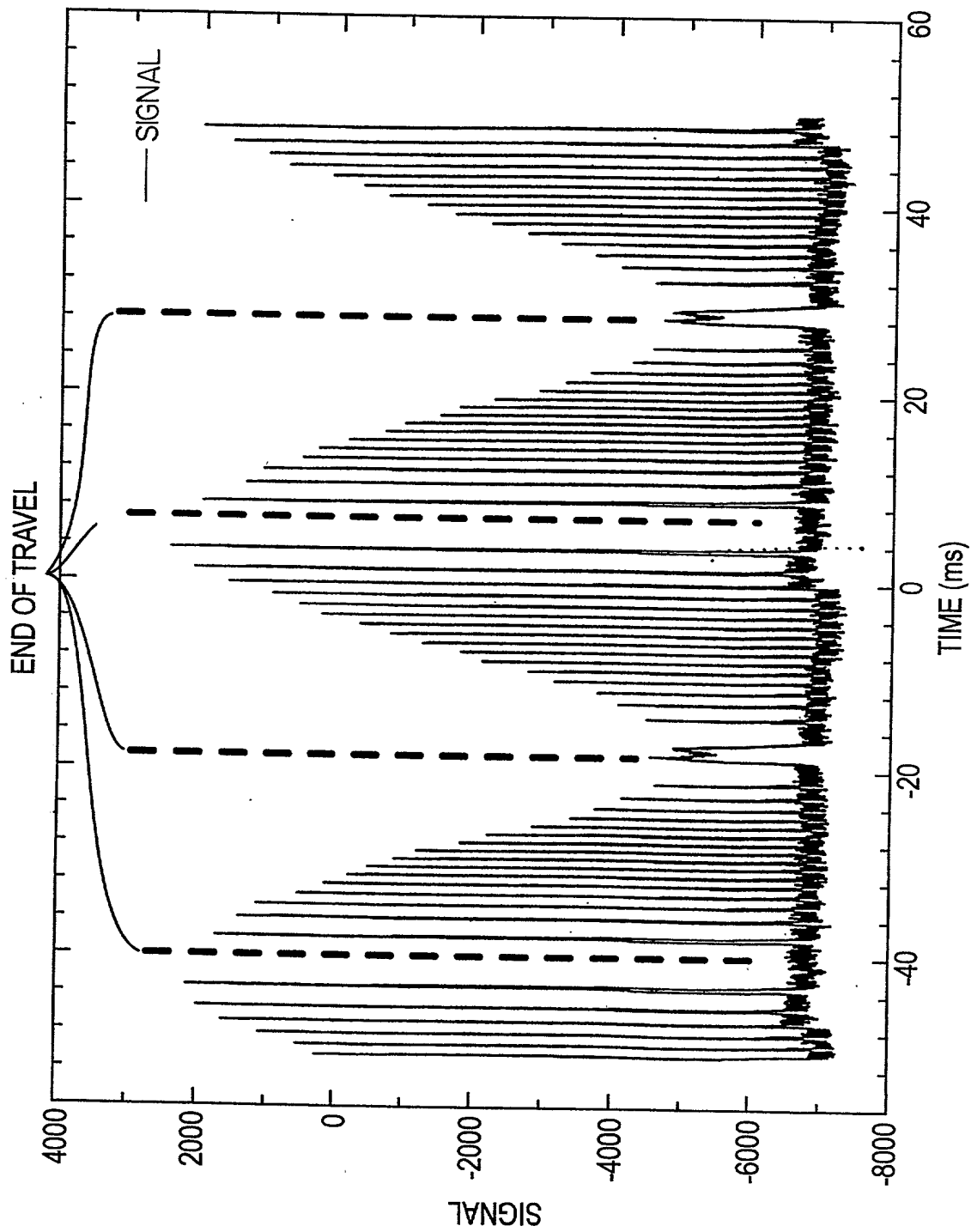


FIG.7(A)

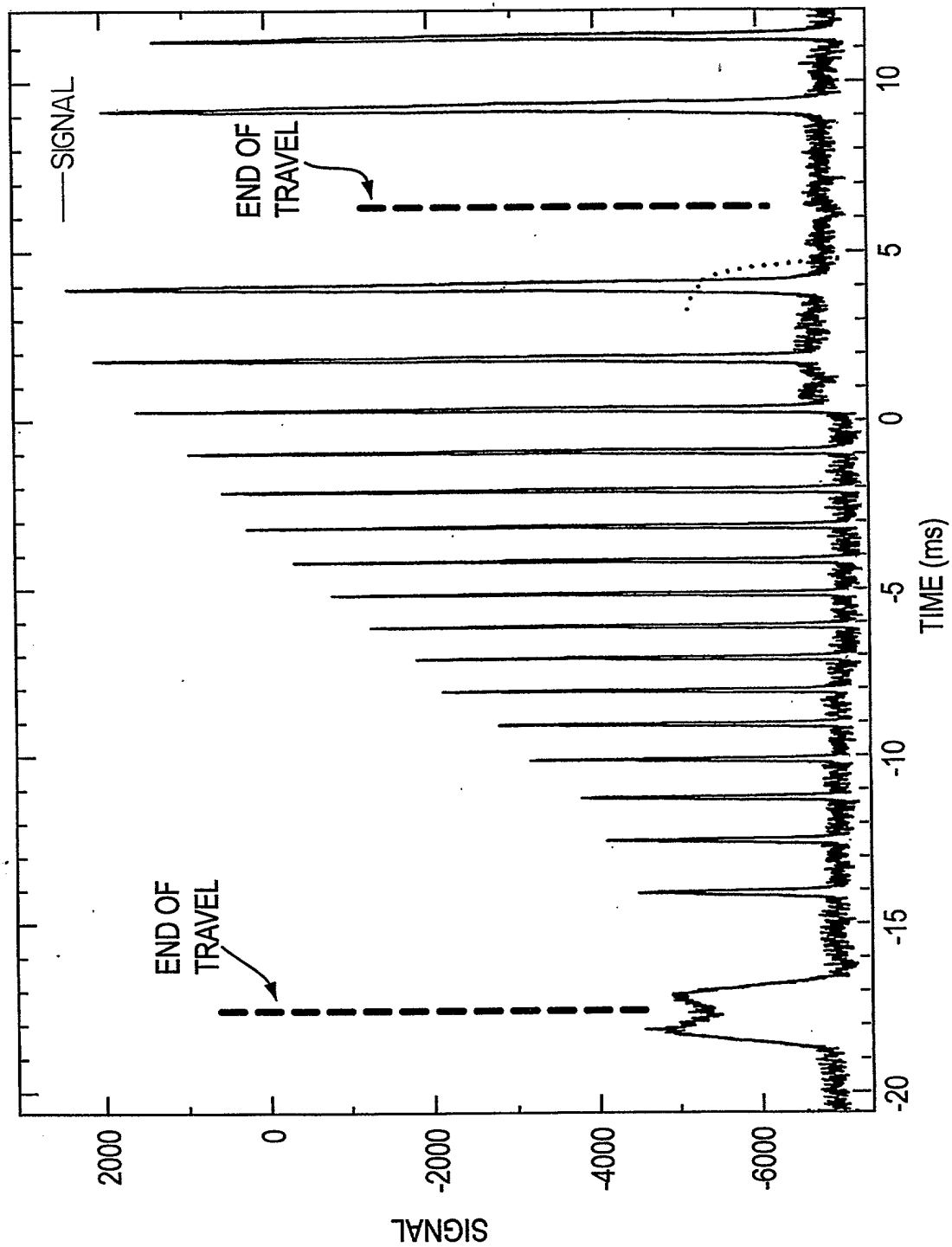


FIG. 7(B)

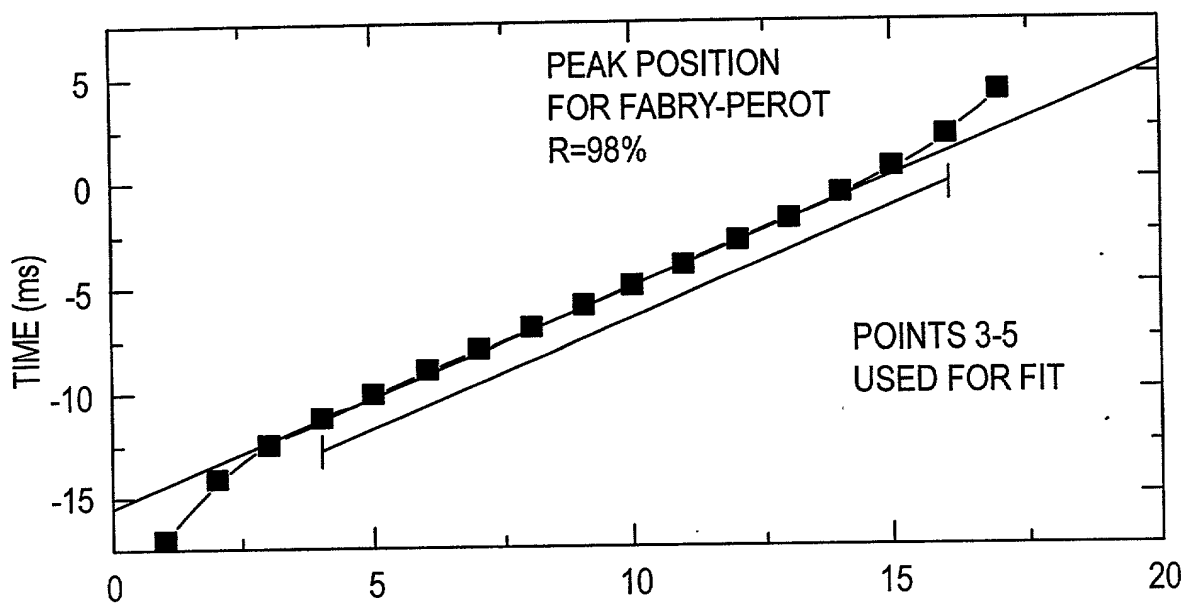


FIG. 7(C)

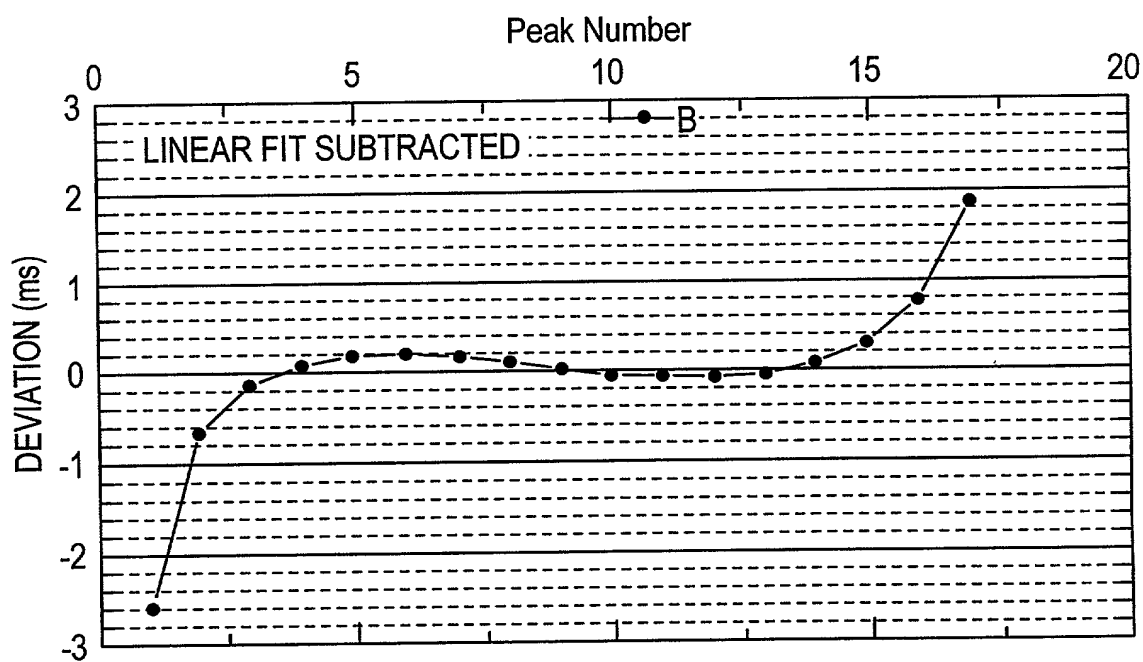


FIG. 7(D)

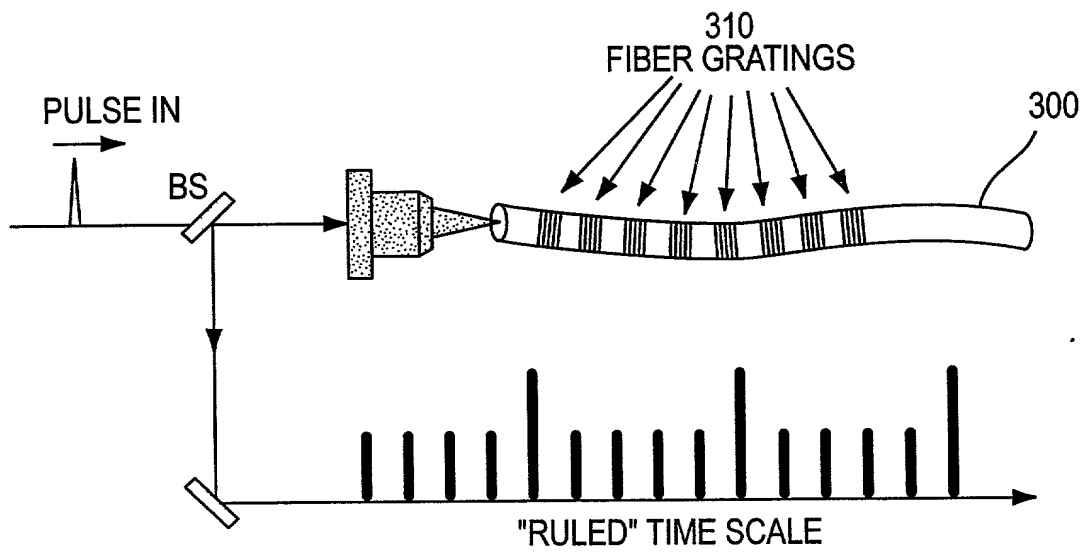


FIG. 8(A)

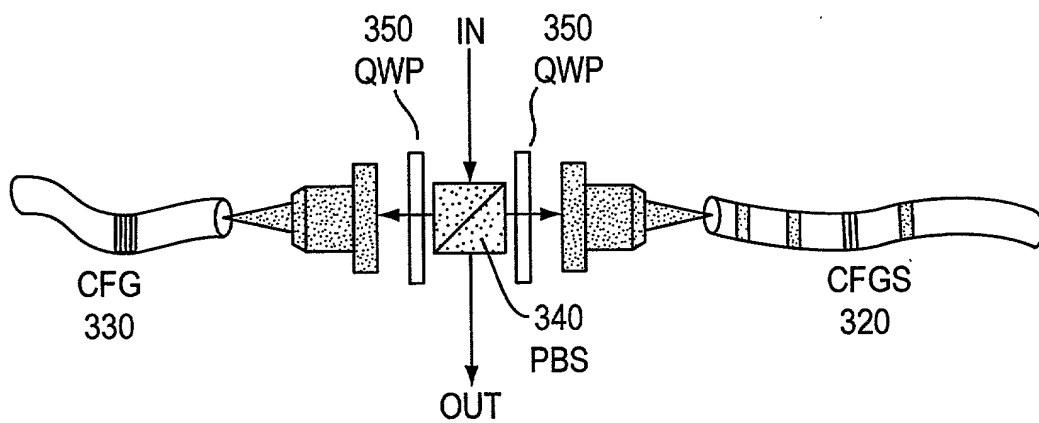


FIG. 8(B)

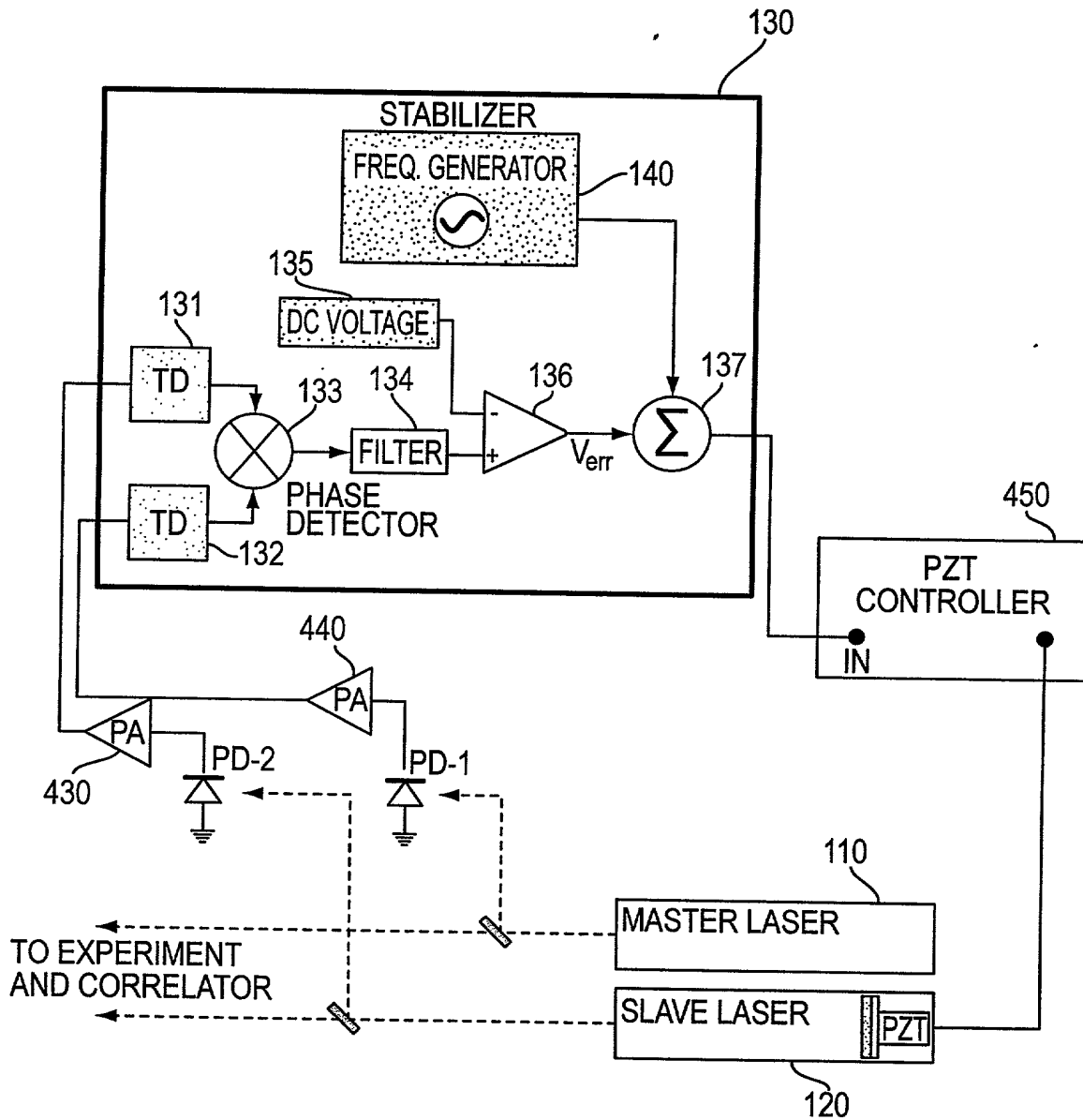


FIG. 9

30050715 011502

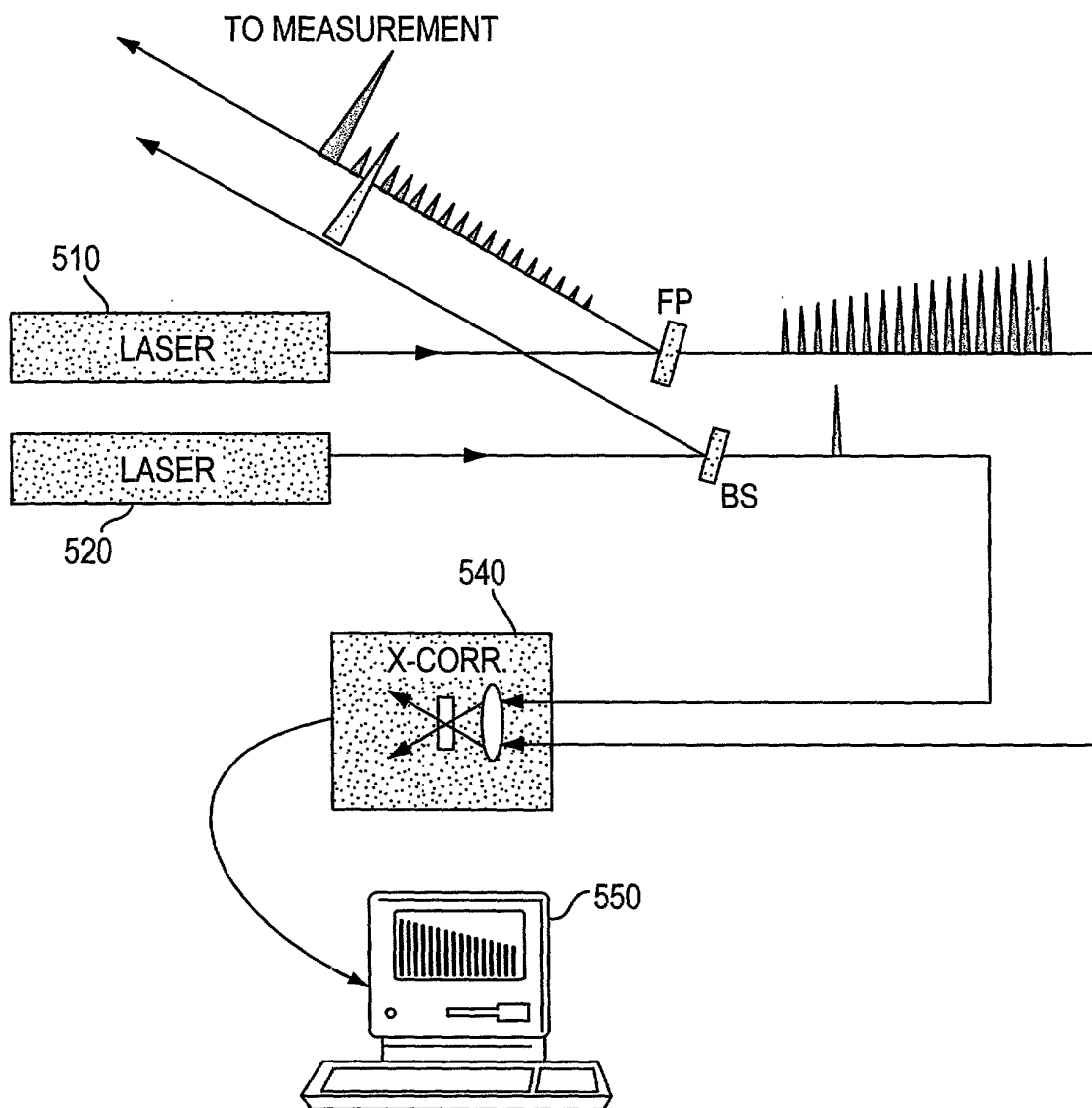


FIG. 10

The diagram illustrates a scanning laser system for surface topography measurement. The system is enclosed in a dashed rectangular frame. At the top right, a box labeled "SCANNING LASER SYSTEM" (610) contains a "MASTER LASER" (620) and a "SLAVE LASER" (620). The "SLAVE LASER" is connected to a "PZT" (Piezoelectric Transducer) and a "STABILIZER" (630). The "MASTER LASER" output is directed via a mirror to a "FP" (Far-Field Plane) mirror. The "SLAVE LASER" output is directed via a mirror to a "BS" (Beam Splitter) (660). The "FP" mirror is positioned to reflect the "MASTER LASER" beam onto the "BS" (660). The "BS" (660) splits the beam into two paths: one path is directed to a "TIMING UNIT" (641), and the other path is directed to a "CORRELATOR" (640). The "CORRELATOR" (640) is connected to a "DAQ" (Data Acquisition) system (650) via an "X-CHANNEL" and a "Y-CHANNEL". The "DAQ" system is represented by a computer icon. The "CORRELATOR" (640) is also connected to a "SURFACE" (670) via a lens "L1". The "SURFACE" (670) is shown as a rough, irregular line representing the surface being measured. The "BS" (660) is also connected to the "SURFACE" (670) via a lens "L1".

FIG. 11 (A)

The diagram illustrates the experimental setup for measuring the time delay of a surface pulse. The setup includes a Scanning Laser System (610) consisting of a Master Laser, a Slave Laser (620), and a Stabilizer (630). A Gate Pulse is generated and sent to a Correlator (640) and the Slave Laser. The Slave Laser beam is directed through a Beam Splitter (BS) and a Far-Field Plane (FP) to a Surface. The reflected beam is collected by a lens (L1) and sent back to the Correlator. The Correlator is connected to a Data Acquisition (DAQ) system. The diagram shows the timing of the Gate Pulse, Surface Pulse, and Pulse Train.

FIG. 11(B)



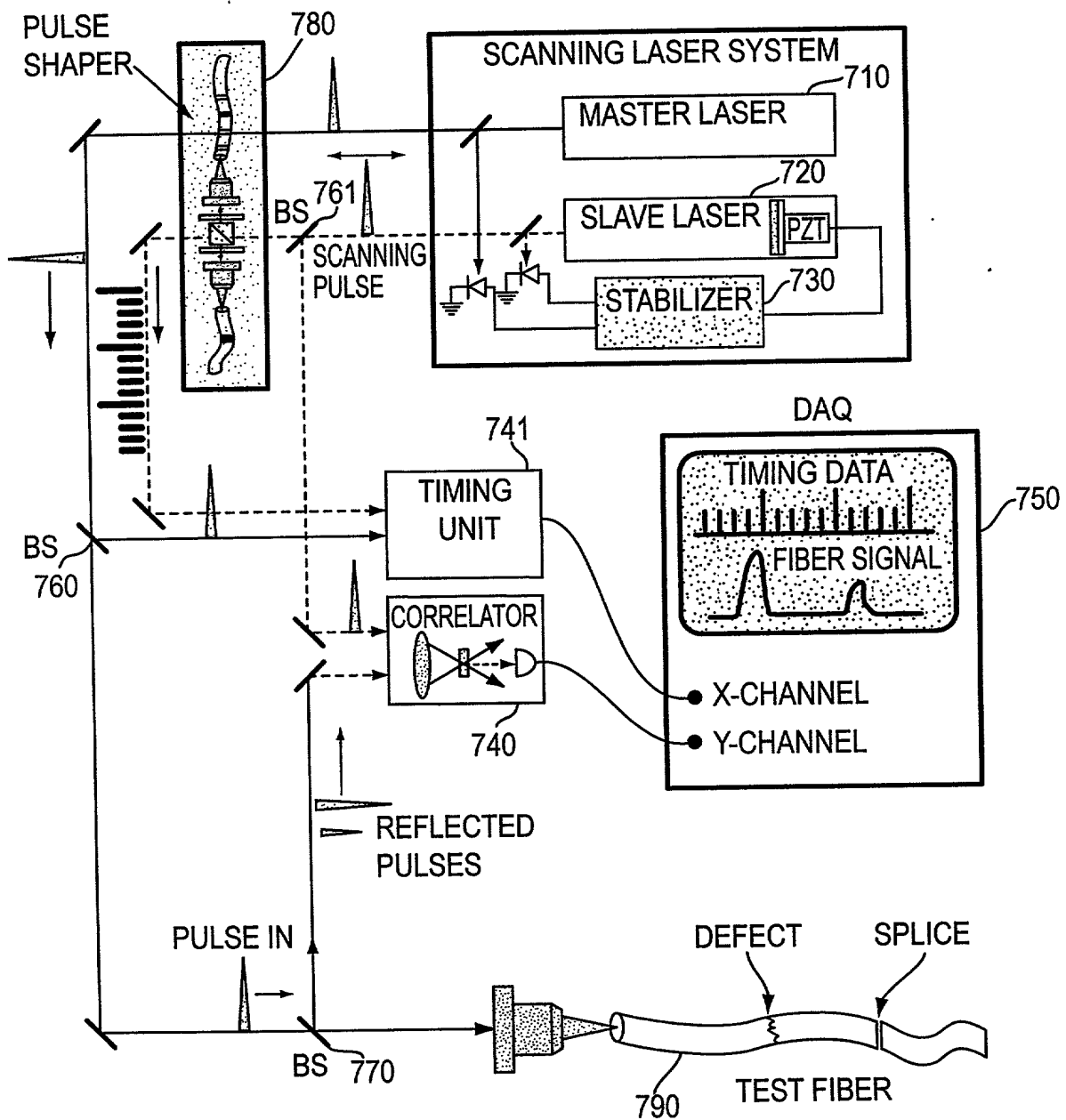


FIG. 12

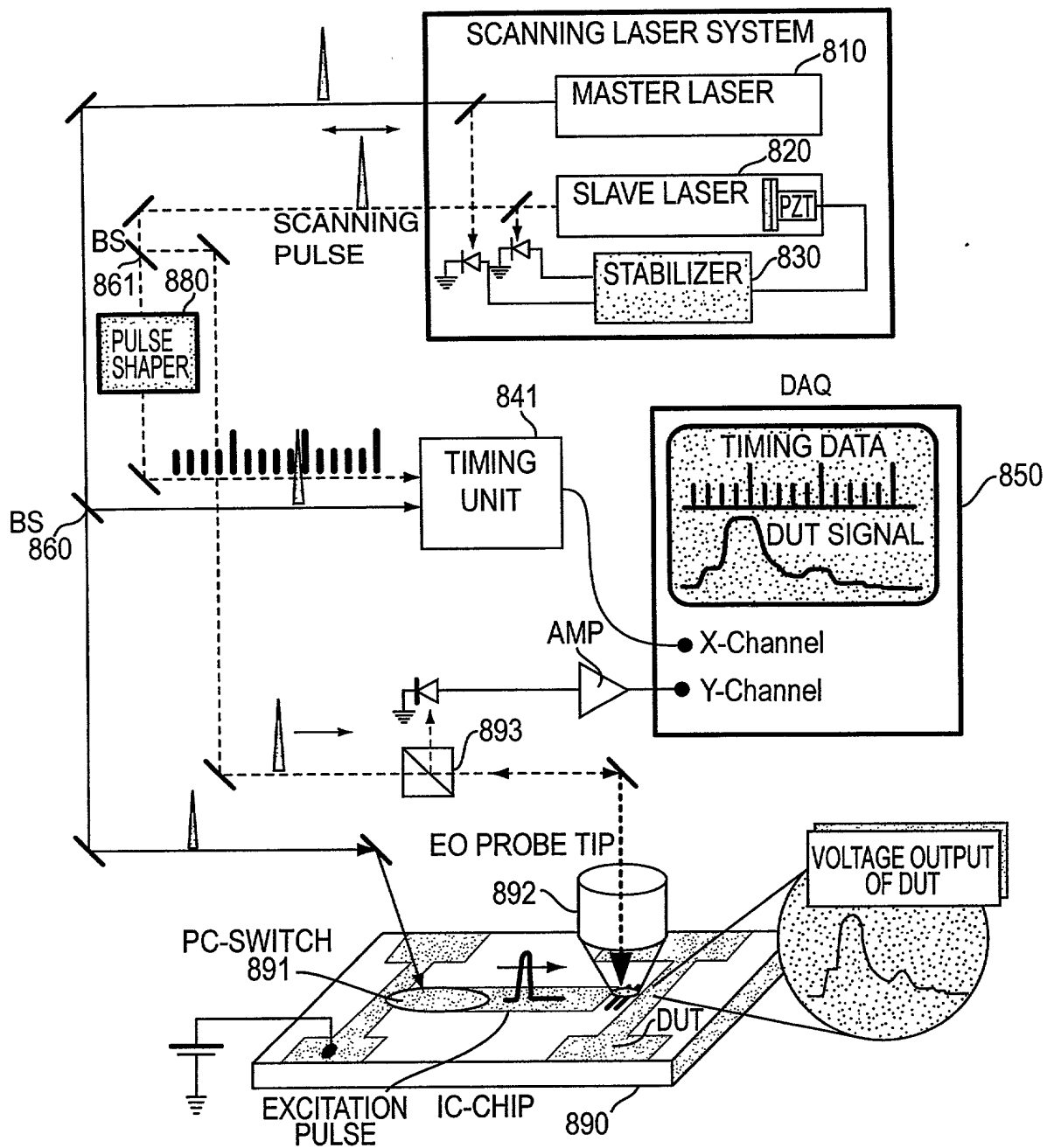


FIG. 13